REMARKS

In the Office Action mailed March 24, 2009, the Examiner noted that Applicant's amendments and remarks were sufficient to overcome the claim objections to claims 38, 39, 44, and 55-57 and withdrew the rejections of claims 21-23 and 26-39 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 6,222,083 to Colle et al. (Colle '083) in view of U.S. Pat. No. 4,072,607 to Schiller, et al (Schiller) and the rejections of claims 40-57 under 35 U.S.C. § 103(a) as being unpatentable over Colle '083 in view of Schiller in further view of U.S. Pat. No. 6,222,083 to Colle et al. (Colle '083). However, the Examiner maintained his rejections of all of the claims. In particular, the Examiner rejected claims 21-23 under 35 U.S.C. § 102(b) as being anticipated by Schiller or, alternatively, as being unpatentable over Schiller under 35 U.S.C. § 103(a). Claims 26-39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schiller in view of Colle '083. Claims 40-57 were rejected under 35 U.S.C. 103(a) as being unpatentable over Schiller in view of Colle '233. Applicants herein present remarks in light of the office action and the prior art. Applicants respectfully request reconsideration and an allowance of currently pending claims 21-23 and 26-57.

Response to Examiner's Response to Amendment and Argument

In response to Applicant's amendments and remarks in the office action dated 12 February 2009, the Examiner found Applicant's remarks relating to Schiller to be unpersuasive. Specifically, the Examiner stated that U.S. Pat. No. 5,600,044 to Colle, et al. (Colle '044) teaches that NH_2 containing polymers are effective hydrate inhibitors. Applicants respectfully disagree with the Examiner's characterization for at least two reasons. First, the relevant portions of Colle '044 teach that certain polymers and copolymers of acrylamides having the disclosed structures are effective hydrate inhibitors and the disclosed structures exclude NH_2 containing polymers. Second, Colle '044 specifically states that NH_2 containing polymers are not effective hydrate inhibitors. For at least these reasons and the reasons set forth in Applicants' prior office action responses, which are specifically incorporated by reference

herein, Applicants believe that the Schiller reference is not relevant to the claims of the present application and all rejections based on Schiller should be deemed overcome.

Regarding the portions of Colle '044 cited by the Examiner, Colle '044 states, under the heading "INHIBITOR DESCRIPTION," that "Compounds belonging to the group of polymers and copolymers of acrylamides, and mixtures thereof, are very effective inhibitors of hydrate nucleation, growth, and/or agglomeration (collectively referred to as hydrate formation)." Colle '044, col. 5, ll. 11-16. Colle '044 goes on to state "A generic structure of the acrylamide homopolymers is depicted as follows:" and shows a structure with an N connected to an R1 and an R2. *Id.* at ll. 16-24. Colle '044 then states that R1 is a *hydrocarbon group* and R2 is a hydrogen atom or a hydrocarbon group. *Id.* at ll. 25-28. So, Colle '044 is not teaching that *any* polymer or copolymer of acrylamides will work, only that acrylamides having the disclosed structure are effective hydrate inhibitors. The disclosed structure clearly eliminates the possibility of an NH_2 containing polymer because R1 must be a hydrocarbon group and hydrogen is not a hydrocarbon group, as defined in Colle '044. Similarly, Colle '044 provides that "N-substituted acrylamide copolymers are also effective inhibitors of hydrate nucleation, growth, and/or agglomeration." Colle '044 at col. 5, ll. 64-66. Colle '044 then provides a generic structure for the hydrate inhibitors similar to the one disclosed above, stating that "R1 and R2 are not both hydrogen..." *Id.* at col. 6, line 10. As the passages show, Colle '044 does not state that NH_2 containing polymers are effective hydrate inhibitors. Instead, Colle '044 excludes such structures from its disclosure of effective hydrate inhibitors. For at least these reasons, Applicants respectfully request reconsideration of the rejection based on Schiller.

As noted in prior office action responses, Colle '044 teaches that NH_2 containing polymers do not perform well as hydrate inhibitors. In particular, it is noted that a mini-loop sub-cooling temperature of about 6-7 degrees Fahrenheit is expected in an "aqueous sea salt/gas solution with no inhibitor present" and that higher sub-cooling temperatures indicate better hydrate inhibitors. Colle '044 at col. 11, ll. 35-40. Colle '044 tests the NH_2 containing polymers ("PAM," *see* Colle '044 at col. 7, ll. 1-8) with other potential inhibitors in Table 1 and the PAM performs worse than even the control case. *Id.* at Table 1, col. 11, ll. 50-67. These test results

unequivocally indicate that the NH_2 containing polymers taught by Schiller are ineffective hydrate inhibitors. As shown, Colle '044 does not teach any preference for the NH_2 containing polymers taught by Schiller. Instead, Colle '044 teaches preferred hydrate inhibitors having generic structures that exclude NH_2 containing polymers and provides experimental evidence showing that such acrylamides are ineffective hydrate inhibitors. For at least these reasons, Applicants respectfully request reconsideration of the rejection based on Schiller and allowance of all rejected claims 21-23 and 26-57, which all rely on Schiller as either the sole reference or the primary reference in each rejection.

CONCLUSION

In view of the amendments and remarks set forth above, Applicants respectfully request allowance of all pending claims 21-23 and 26-57 and issuance of a notice of allowance of all pending claims. No other fees are believed to be due at this time, however, the Commissioner is hereby authorized to charge the Deposit Account No. 05-1328 for any additional fees associated with this application. Further, if the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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